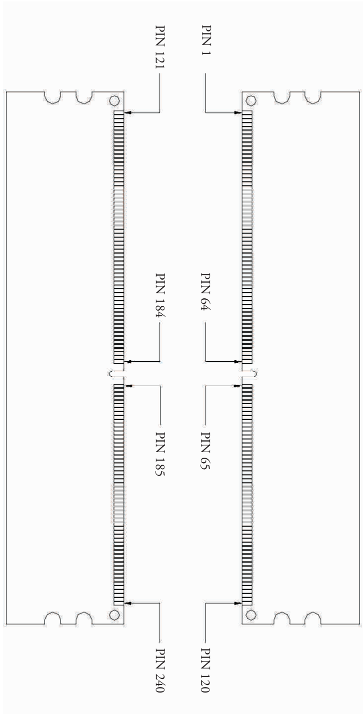
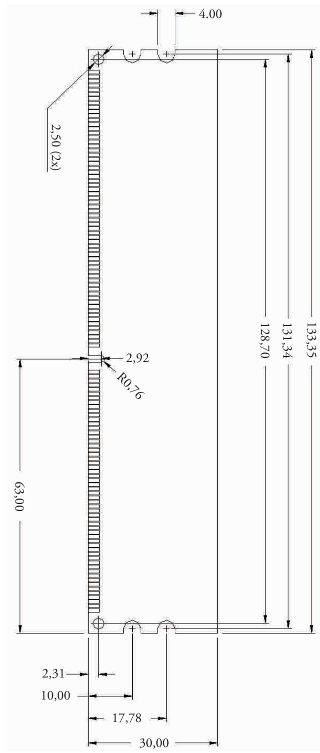
GR 800 D2 64 L6 2G

GOODRAM
SPEED / DATA TRANSFER 800MHz / PC2-6400
MODULE TYPE DDR2 SDRAM DIMM
MODULE DATA WIDTH 64
CAS LATENCY 6
MODULE DENSITY 2GB

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DDR II MODULE PART NUMBERING SYSTEM





FEATURES

PART NUMBER	GR800D264L6/2G
MODULE TYPE	DDR2 SDRAM DIMM
MODULE DENSITY	2GB
MODULE DATA WIDTH	64
DRAM CHIP ORAGNIZATION	128Mx8
NUMBER OF DRAM CHIPS	16
NUMBER OF MODULE RANKS	2
NUMBER OF MODULE SIDES	2
REGISTERED	NO
ECC SUPPORT	NO
PIN COUNT	240 PIN
SUPPLY VOLTAGE	1,8V
SSTL_18 COMPATIBLE	YES
PROGRAMMED SPD MEMORY	128 BYTES
MAX AVG PERIODIC REFRESH INTERVAL	7,8 s

OPERATING FREQUENCY	CAS Latency
800MHz (2x400MHz) | PC2-6400	6
667MHz (2x333MHz) | PC2-5300	5
533MHz (2x266MHz) | PC2-4200	4

DYNAMIC PARAMETERS FOR 800MHz

RAS# TO CAS# DELAY, tRCD	15 ns
ROW PRECHARGE TIME, tRP	15 ns
ROW ACTIVE TO ROW ACTIVE DELAY, tRRD	7 ns
ACTIVE TO PRECHARGE TIME, tRAS	45 ns
ACTIVE TO ACTIVE / AUTO REFRESH TIME, tRC	60 ns
AUTO REFRESH TO ACTIVE / AUTO REFRESH, tRFC	127 ns
DEVICE CYCLE TIME, tCK MAX	8

PCB DETAILS

PCB TYPE	DDR2 SDRAM DIMM
BOARD DIMENSIONS	133,35 x 30mm ± 0,1mm
BOARD THICKNESS	1,27mm ± 0,13mm
DRAM PACKAGE INFORMATION	FBGA, x8bit
CONTACT PADS (PIN)	GOLD PLATED

Rev. 04.12.2007

Wilk Elektronik S.A.
Poland, 43-174 Łaziska Górne, ul. Mikołowska 42
tel.: 0-32/ 736 90 00, fax: 0-32/ 736 90 01
www.wilk.com.pl ● www.goodram.com

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SPD CONFIGURATION

BYTE	DESCRIPTION	HEX	DEC
0	Number of Serial PD Bytes written during module production	0x80	128
1	Total number of Bytes in Serial PD device	0x08	8
2	Fundamental Memory Type (FPM, EDO, SDRAM . . .)	0x08	8
3	Number of Row Addresses on this assembly	0x0E	14
4	Number of Column Addresses on this assembly	0x0A	10
5	Number of DIMM Banks	0xA1	161
6	Data Width of this assembly	0x40	64
7	Data Width of this assembly	0x00	0
8	Voltage Interface Level of this assembly	0x05	5
9	SDRAM Cycle time at Maximum Supported CAS Latency (CL), CL=X	0x25	37
10	SDRAM Access from Clock	0x40	64
11	DIMM configuration type (Non-parity, Parity or ECC)	0x00	0
12	Refresh Rate/Type	0x82	130
13	Primary SDRAM Width	0x08	8
14	Error Checking SDRAM Width	0x00	0
15	SDRAM Device Attributes: Minimum Clock Delay, Back-to-Back RCA	0x00	0
16	SDRAM Device Attributes: Burst Lengths Supported	0x0C	12
17	SDRAM Device Attributes: Number of Banks on SDRAM Device	0x08	8
18	SDRAM Device Attributes: CAS Latency	0x70	112
19	SDRAM Device Attributes: CS Latency	0x00	0
20	SDRAM Device Attributes: Write Latency/DIMM Type Information	0x02	2
21	SDRAM Module Attributes	0x00	0
22	SDRAM Device Attributes: General	0x07	7
23	Minimum Clock Cycle at CL = X - 0.5	0x30	48
24	Maximum Data Access Time (tAC) from Clock at CL = X - 0.5	0x45	69
25	Minimum Clock Cycle at CL = X - 1	0x3D	61
26	Maximum Data Access Time (tAC) from Clock at CL = X - 1	0x50	80
27	Minimum Row Precharge Time (tRP)	0x3C	60
28	Minimum Row Active to Row Active delay (tRRD)	0x1E	30
29	Minimum RAS to CAS delay (tRCD)	0x3C	60
30	Minimum Active to Precharge Time (tRAS)	0x2D	45
31	Module Bank Density	0x01	1
32	Address and Command Input Setup Time Before Clock	0x17	23
33	Address and Command Input Hold Time After Clock	0x25	37
34	Data Input Setup Time Before Clock	0x05	5
35	Data Input Hold Time After Clock	0x12	18
36	Write recovery time (tWR)	0x3C	60
37	Internal write to read command delay (tWTR)	0x1E	30
38	Internal read to precharge command delay (tRTP)	0x1E	30
39	Memory Analysis Probe Characteristics	0x00	0
40	Extension of Byte 41 tRC and Byte 42 tRFC	0x06	6
41	SDRAM Device Minimum Active to Active/Auto Refresh Time (tRC)	0x3C	60
42	SDRAM Device Minimum Auto Refresh to Active/Auto Refresh (tRFC)	0x7F	127
43	SDRAM Device Maximum device cycle time (tCKmax)	0x80	128
44	SDRAM Device Maximum skew between DQS and DQ signals (tDQSQ)	0x14	20
45	DDR SDRAM Device Maximum Read Data Hold Skew Factor (tQHS)	0x1E	30
46	Reserved for future use	0x00	0
47	SDRAM Device Attributes - DDR SDRAM DIMM Height	0x00	0
48	Reserved for future use	0x00	0
49	Reserved for future use	0x00	0
50	Reserved for future use	0x00	0
51	Reserved for future use	0x00	0
52	Reserved for future use	0x00	0
53	Reserved for future use	0x00	0
54	Reserved for future use	0x00	0
55	Reserved for future use	0x00	0
56	Reserved for future use	0x00	0
57	Reserved for future use	0x00	0
58	Reserved for future use	0x00	0
59	Reserved for future use	0x00	0
60	Reserved for future use	0x00	0
61	Reserved for future use	0x00	0
62	SPD Revision	0x11	17
63	Checksum for Bytes 0-62	0x1F	31
64-255	Manufacturer’s specific data		

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